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Your guide to stopping COVID in your home

Joey Fox · Follow
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How COVID Spreads

#COVIDisAirborne. It's transmitted when an infectious person and susceptible person are sharing air. There are 3 main scenarios:

1. Close range — they share the most air. This is the highest risk.

2. If they share a room, the virus particles they exhale can build up.

As you inhale a higher dose (concentration, time, breathing rate), risk of infection increases. Virus can be removed through ventilation (windows) or filtration (HEPA/CR box).

3. Long range transmission

This is transmission with a lower dose and generally further away. It's not as common but still a risk if you are in a house with someone who is infected.

Before COVID Hits Your Home

The one thing you can always do is keep the air clean. Keep the windows open as much as possible and run humidifiers, HEPA filters or CR Boxes. If someone is infected, you'll breathe in a lower dose.

Here's some advice:

You want relative humidity (RH) to be between 40–60%. Having good RH in your home does 3 things:

1. **Viruses die quicker**
2. **With low RH, the droplet will evaporate quickly and stay suspended in the air. With good RH, it will fall.**

3. **Low RH makes you more susceptible to airborne diseases.**

If it's cold outside, run humidifiers in your house — especially bedrooms. It's good for your health in general. Clean and disinfect them regularly.

You Start Feeling Sick

The safest thing to do is to act like you have COVID (see below) and rapid test periodically until symptoms resolve or you get a positive test.

If you can't isolate, then be more diligent about running filters, opening windows and masking.

You Test Positive

Right away — N95s, open windows, turn on filters.

Isolation Room

If you can, setup an isolation room. Here are some things to do:

1. **Run a filter in the isolation room. If any air escapes, it will have less virus.**

https://cleanaircrew.org/someone-in-my-home-has-covid-how-do-we-isolate-safely/

2. **Try to block any paths that the air can leak into the house at the door.**

3. **Create negative pressure in the room**

Turn on an exhaust fan in an adjacent bathroom or have a fan blowing air out a window. This will cause air to leak into the room and not out.

4. **Run a humidifier in the room if the air is dry. 5. If a return vent is located in the isolation room, block it by taping plastic around it**

They look like this:

Your Home Furnace

Furnace filter: If it's a 1" slot, use the Filtrete 1900. If it's a larger slot, get a MERV-13 filter that matches the slot size. If air can't reach the far end of the house or the furnace stops working, put back the old filter and reset the furnace.

Filtrete 1000 also works against aerosols, but 1900 is better. If you have a MERV-13/ Filtrete 1000/1900 filter in your furnace, run your fan all the time to get the filtration. If your furnace filter has lower rating, leave it on auto.

Sharing a Bathroom

Leave the exhaust fan running between uses and keep the window open. It's best to wait between uses, especially if you are not wearing a mask (eg. shower). 25 minutes should be fine if exhaust fan is running. The longer the better.

PSA: Close the toilet lid before flushing. Inhaling aerosolized fecal matter isn't good for you, especially if it's virus laden. #CloseTheLid As @DFisman says, "air: it's the new poop".

When you're done, WASH YOUR HANDS!

Sharing other rooms, like a dining room is the same concept. If the infected person

used it without a mask, open windows, run filters and wait before using it yourself.

Wear a N95 as much as possible, especially when not in the isolation room. If you need to take it off (eating, showering, sleeping), make sure the air is clean.

In the isolation room, it's lower risk to unmask and more comfortable for the infected person.

If you don't have a N95, use knot & tuck with a surgical mask.

Filter Location

If you only have 1 HEPA/CR Box or humidifier, I think it's best in the room with the infected person as source control and for their health.

You can place one outside their room to filter air that leaks out.

Otherwise, the best room for the filter is the one that you are in. They are portable, so you can carry them around.

Exiting

Don't listen to US & Canadian Public Health and wait only 5 days. Best is to wait until

symptoms resolve + 2 negative rapid tests on 2 days. At least wait for symptoms to resolve + negative rapid test.

N95s, filters, open windows, isolate, humidifiers — that's it. Some can do more than others, but do what you can.

#COVIDisAirborne. If you know how it spreads, you know how to stop it. Exposure is inevitable, infection isn't. We aren't helpless.

Covid-19 Ventilation Masking Humidification Twitter Threads

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Published in It's Airborne

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Want to know how to stop COVID and other airborne diseases? Interested in ventilation, filtration and UV to clean the air? This blog has it all.

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Written by Joey Fox

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P. Eng. HVAC engineer. I work on sustainability for building design and operations with a focus on building automation systems. Ensuring people get clean air.

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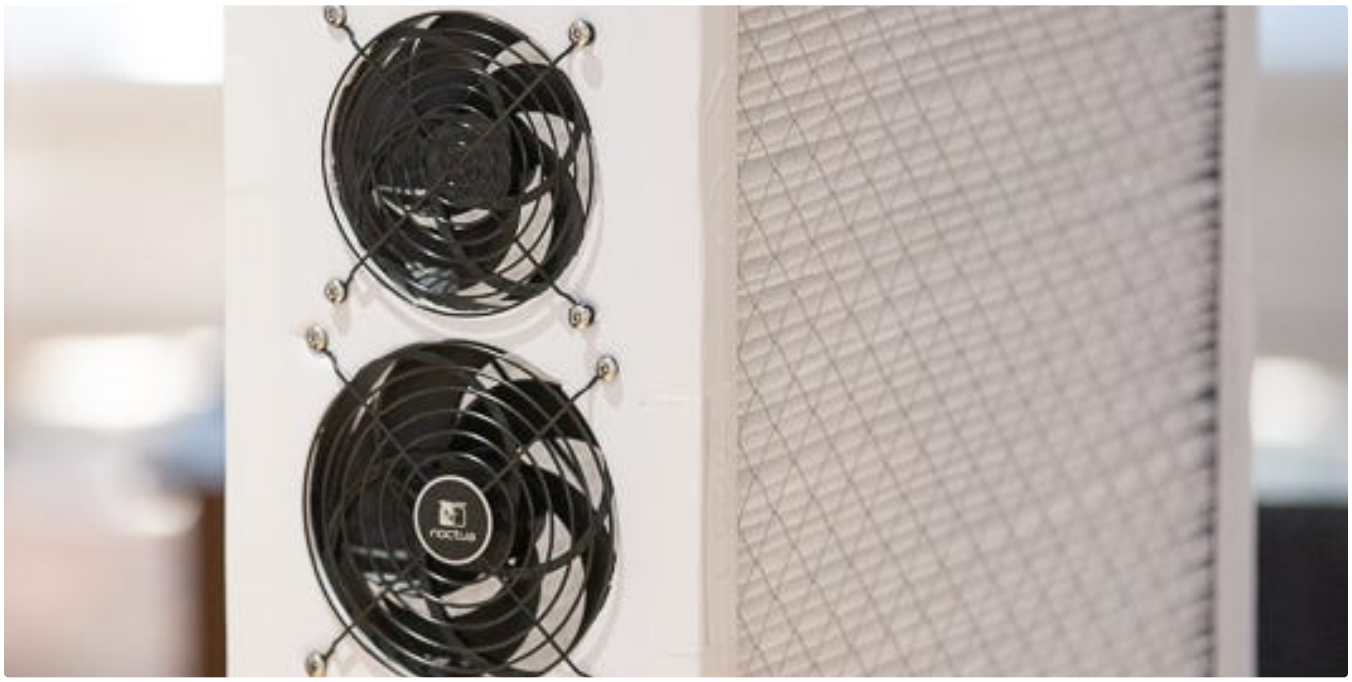

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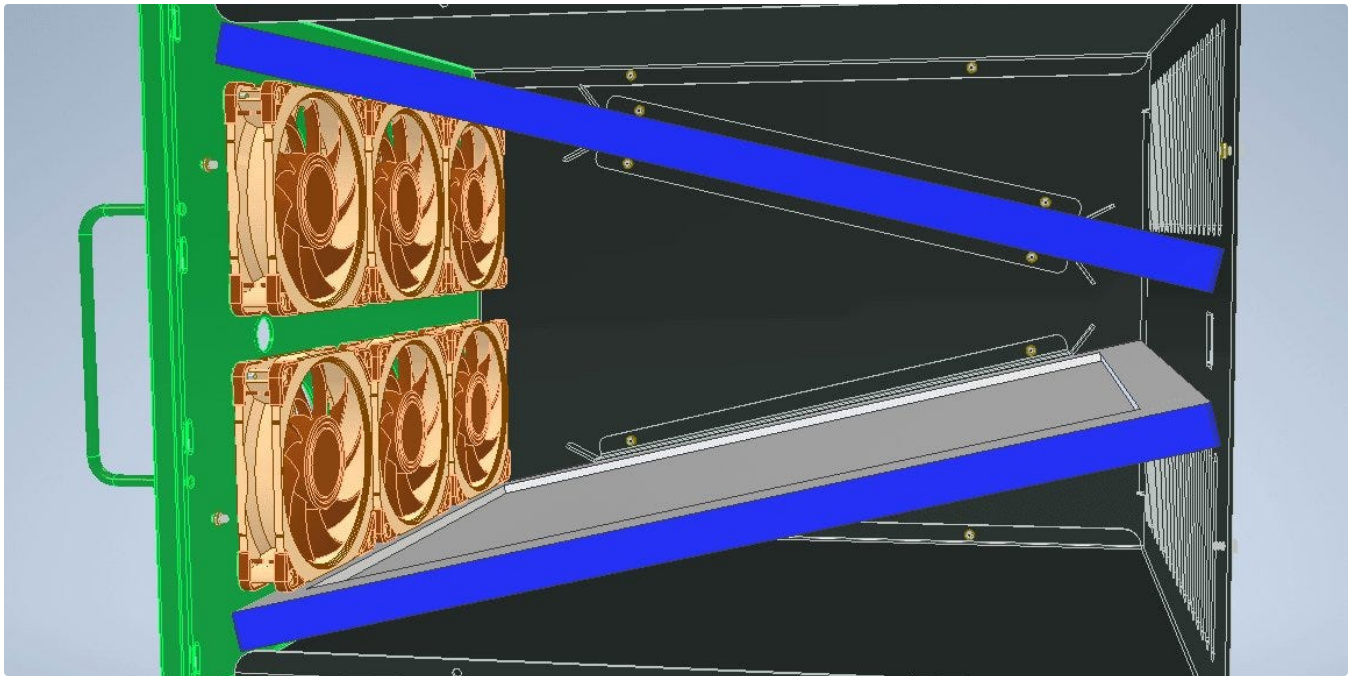

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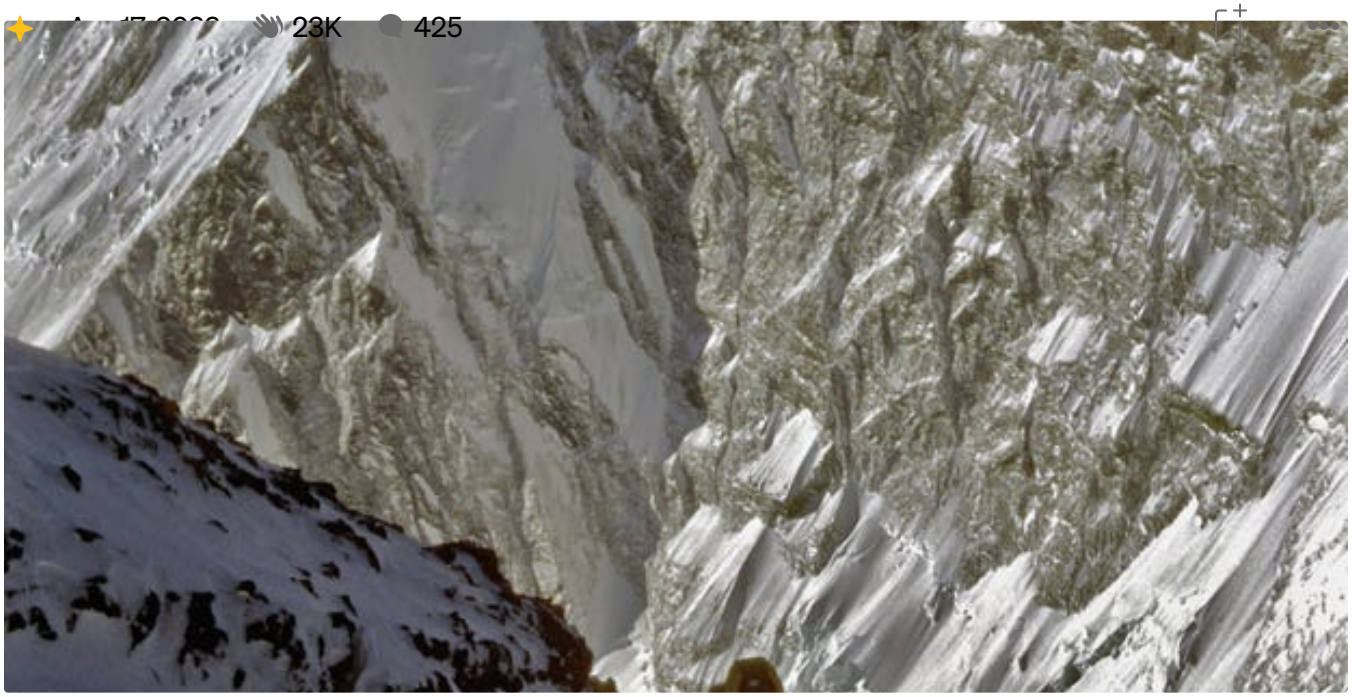

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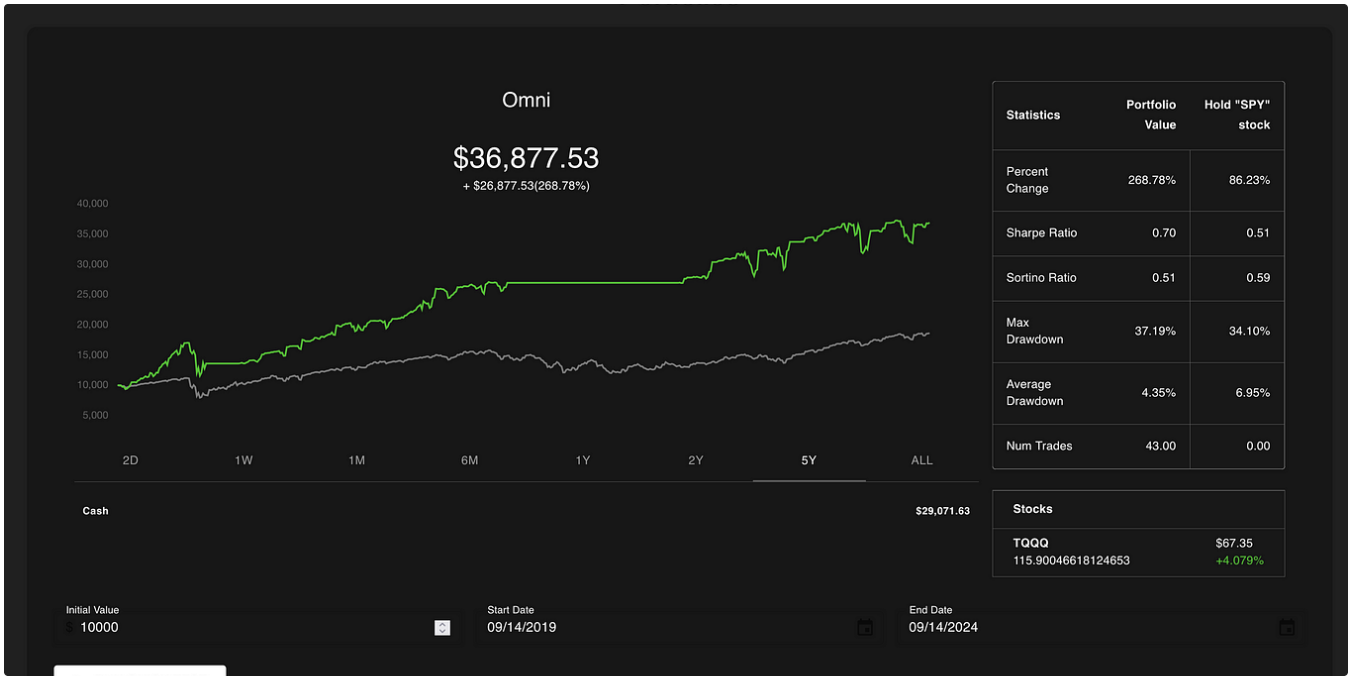

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